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International Bureau

## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

<b>(51) International Patent Classification <sup>7</sup> :</b> <b>C12N 9/12, C12Q 1/48, C07K 14/47,</b> <b>C12N 15/63, 5/10, C12S 3/14, C07K</b> <b>1/113, 19/00, A61P 43/00</b>		<b>A2</b>	<b>(11) International Publication Number:</b> <b>WO 00/56864</b> <b>(43) International Publication Date:</b> 28 September 2000 (28.09.00)						
<b>(21) International Application Number:</b> PCT/GB00/01004 <b>(22) International Filing Date:</b> 17 March 2000 (17.03.00) <b>(30) Priority Data:</b> 9906245.7 19 March 1999 (19.03.99) GB <b>(71) Applicant (for all designated States except US):</b> UNIVERSITY OF DUNDEE [GB/GB]; 11 Perth Road, Dundee DD1 4HN (GB). <b>(72) Inventors; and</b> <b>(75) Inventors/Applicants (for US only):</b> ALESSI, Dario [GB/GB]; 309, Perth Road, Dundee DD2 1LG (GB). BALENDRAN, Anudharan [LK/GB]; Flat 26, Peterson Hall, 25 Roseangle, Dundee DD1 4LS (GB). DEAK, Maria [HU/GB]; 18 Forth Place, Dundee DD2 4HT (GB). CURRIE, Richard [GB/GB]; 31 Seymour Street, Dundee DD2 1HA (GB). DOWNES, Peter [GB/GB]; 15 West Acres Drive, Wormit DD6 8NR (GB). CASAMAYOR, Antonio [ES/US]; Department of Molecular, Cellular and Developmental Biology, Yale University, New Haven, CT 06520-8103 (US). <b>(74) Agent:</b> MILES, John, S.; Eric Potter Clarkson, Park View House, 58 The Ropewalk, Nottingham NG1 5DD (GB).		<b>(81) Designated States:</b> JP, US, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).  <b>Published</b> <i>Without international search report and to be republished upon receipt of that report.</i>							
<b>(54) Title:</b> ENZYME									
<div style="display: flex; justify-content: space-around; align-items: flex-start;"><div style="text-align: center;"><p><b>A</b></p><table border="1"><tr><td>PH Domain + PIF</td><td>PH Domain ---</td></tr><tr><td>ΔPH-PDK1 + PIF</td><td>ΔPH-PDK1 ---</td></tr><tr><td>PDK1 + PIF</td><td>PDK1 ---</td></tr></table></div><div style="text-align: center;"><p><b>B</b></p><p>Growth on SD-Leu-Trp</p></div><div style="text-align: center;"><p><b>C</b></p><p>Growth on SD-Leu-Trp- Ura-His + 3-AT</p></div><div style="text-align: center;"><p><b>D</b></p><p>β-galactosidase activation</p></div></div> <div style="text-align: center; margin-top: 20px;"><p><b>Region A</b> <span style="float: right;"><b>Region B</b></span></p><p><b>PDK2 MOTIF</b></p><pre>PRK2  908  LDVKKIIPFFRLIUSALMDKKVPPFFITFGREDVSNEDDRTGAPITPTI  RSHHLSSEEDQK  PRQFDYIADK  984 PRK1  403  EDVKKIIPFFRLIUSALMDKKVPPFFITFGREDVSNEDDRTGAPITPTI  RSHHLSSEEDQK  PRQFDYIADK  479 PKBQ  400  NEIMQIPFFRLIUSALMDKKVPPFFITFGREDVSNEDDRTGAPITPTI  RSHHLSSEEDQK  PRQFDYIADK  479 p70S6K 321  GQVQNDPFFRLIUSALMDKKVPPFFITFGREDVSNEDDRTGAPITPTI  RSHHLSSEEDQK  PRQFDYIADK  479 SGK   347  KQVQNDPFFRLIUSALMDKKVPPFFITFGREDVSNEDDRTGAPITPTI  RSHHLSSEEDQK  PRQFDYIADK  479 PKCα  510  SDVQNDPFFRLIUSALMDKKVPPFFITFGREDVSNEDDRTGAPITPTI  RSHHLSSEEDQK  PRQFDYIADK  479 PKCβ  569  RDVQNDPFFRLIUSALMDKKVPPFFITFGREDVSNEDDRTGAPITPTI  RSHHLSSEEDQK  PRQFDYIADK  479 PKCγ  290  SDVQNDPFFRLIUSALMDKKVPPFFITFGREDVSNEDDRTGAPITPTI  RSHHLSSEEDQK  PRQFDYIADK  479</pre></div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"><div><p>A... DOMAINE PH + PIF</p><p>B... CROISSANCE SUR SD-Leu-Trp</p><p>C... CROISSANCE SUR SD-Leu-Trp-Ura-His + 3-AT</p><p>D... ACTIVATION DE β-GALACTOSIDASE</p></div><div><p>PRK2  908  LDVKKIIPFFRLIUSALMDKKVPPFFITFGREDVSNEDDRTGAPITPTI  RSHHLSSEEDQK  PRQFDYIADK  984</p><p>PRK1  403  EDVKKIIPFFRLIUSALMDKKVPPFFITFGREDVSNEDDRTGAPITPTI  RSHHLSSEEDQK  PRQFDYIADK  479</p><p>PKBQ  400  NEIMQIPFFRLIUSALMDKKVPPFFITFGREDVSNEDDRTGAPITPTI  RSHHLSSEEDQK  PRQFDYIADK  479</p><p>p70S6K 321  GQVQNDPFFRLIUSALMDKKVPPFFITFGREDVSNEDDRTGAPITPTI  RSHHLSSEEDQK  PRQFDYIADK  479</p><p>SGK   347  KQVQNDPFFRLIUSALMDKKVPPFFITFGREDVSNEDDRTGAPITPTI  RSHHLSSEEDQK  PRQFDYIADK  479</p><p>PKCα  510  SDVQNDPFFRLIUSALMDKKVPPFFITFGREDVSNEDDRTGAPITPTI  RSHHLSSEEDQK  PRQFDYIADK  479</p><p>PKCβ  569  RDVQNDPFFRLIUSALMDKKVPPFFITFGREDVSNEDDRTGAPITPTI  RSHHLSSEEDQK  PRQFDYIADK  479</p><p>PKCγ  290  SDVQNDPFFRLIUSALMDKKVPPFFITFGREDVSNEDDRTGAPITPTI  RSHHLSSEEDQK  PRQFDYIADK  479</p></div></div>				PH Domain + PIF	PH Domain ---	ΔPH-PDK1 + PIF	ΔPH-PDK1 ---	PDK1 + PIF	PDK1 ---
PH Domain + PIF	PH Domain ---								
ΔPH-PDK1 + PIF	ΔPH-PDK1 ---								
PDK1 + PIF	PDK1 ---								

**(57) Abstract**

A method of altering the substrate specificity of phosphoinositide-dependent protein kinase 1 (PDK1) wherein the said PDK1 is exposed to a polypeptide which comprises the amino acid sequence Phe/Tyr-Xaa-Xaa-Phe/Tyr-Zaa-Phe/Tyr wherein Zaa represents a negatively charged amino acid residue. The PDK1 with altered substrate specificity is capable of phosphorylating the underlined residue in a polypeptide with an amino acid sequence corresponding to the consensus sequence Phe/Tyr-Xaa-Xaa-Phe/Tyr-Ser/Thr-Phe/Tyr. The PDK1 with altered specificity may be useful in screening assays and for phosphorylating substrates having the above consensus sequence.